

**APPLICATION FOR PERMIT TO:**

**Drill**       Deepen       Re-enter       Recomplete and Operate

TYPE OF WELL    OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> COALBED <input type="checkbox"/> OTHER _____	Refiling <input type="checkbox"/>
ZONE TYPE    SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONES <input type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>	Sidetrack <input type="checkbox"/>

Date Received:  
05/15/2015

Well Name: Carlson      Well Number: F-15-16HN

Name of Operator: BAYSWATER EXPLORATION AND PRODUCTION LLC      COGCC Operator Number: 10261

Address: 730 17TH ST STE 610

City: DENVER      State: CO      Zip: 80202

Contact Name: Jeff Annable      Phone: (303)928-7128      Fax: (303)218-5678

Email: regulatory@petro-fs.com

**RECLAMATION FINANCIAL ASSURANCE**  
Plugging and Abandonment Bond Surety ID: 20080034

**WELL LOCATION INFORMATION**

QtrQtr: NENE      Sec: 15      Twp: 5N      Rng: 65W      Meridian: 6

Latitude: 40.403696      Longitude: -104.641077

Footage at Surface:      1056      feet      FNL      309      feet      FEL

Field Name: WATTENBERG      Field Number: 90750

Ground Elevation: 4621      County: WELD

GPS Data:  
Date of Measurement: 03/20/2015    PDOP Reading: 1.4    Instrument Operator's Name: Ben Hardenbergh

If well is     Directional     Horizontal (highly deviated)    **submit deviated drilling plan.**

Footage at Top of Prod Zone:	FNL/FSL	FEL/FWL	Bottom Hole:	FNL/FSL	FEL/FWL
<u>1100</u>	<u>FNL</u>	<u>470</u>	<u>1100</u>	<u>FNL</u>	<u>2340</u>
Sec: <u>15</u>	Twp: <u>5N</u>	Rng: <u>65W</u>	Sec: <u>16</u>	Twp: <u>5N</u>	Rng: <u>65W</u>

**LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT**

Surface Ownership:     Fee     State     Federal     Indian

The Surface Owner is:     is the mineral owner beneath the location.  
(check all that apply)     is committed to an Oil and Gas Lease.  
    has signed the Oil and Gas Lease.  
    is the applicant.

The Mineral Owner beneath this Oil and Gas Location is:     Fee     State     Federal     Indian

The Minerals beneath this Oil and Gas Location will be developed by this Well:    Yes

The right to construct the Oil and Gas Location is granted by:    oil and gas lease

Surface damage assurance if no agreement is in place: \_\_\_\_\_      Surface Surety ID: \_\_\_\_\_

## LEASE INFORMATION

Using standard QtrQtr, Sec, Twp, Rng format, describe one entire mineral lease that will be produced by this well (Describe lease beneath surface location if produced. Attach separate description page or map if necessary.)

Township 5 North, Range 65 West of the 6th PM  
Section 15: Part of the NENE, described as Lot B Recorded Exemption (RE) 2049

See attached lease map.

Total Acres in Described Lease: 28 Described Mineral Lease is:  Fee  State  Federal  Indian

Federal or State Lease # \_\_\_\_\_

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 0 Feet

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 416 Feet

Building Unit: 568 Feet

High Occupancy Building Unit: 4089 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 287 Feet

Above Ground Utility: 280 Feet

Railroad: 5280 Feet

Property Line: 274 Feet

### INSTRUCTIONS:

- All measurements shall be provided from center of the Proposed Well to nearest of each cultural feature as described in Rule 303.a.(5).
- Enter 5280 for distance greater than 1 mile.
- Building - nearest building of any type. If nearest Building is a Building Unit, enter same distance for both.
- Building Unit, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.

## DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a:  Buffer Zone  
 Exception Zone  
 Urban Mitigation Area

- Buffer Zone – as described in Rule 604.a.(2), within 1,000' of a Building Unit
- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.
- Urban Mitigation Area - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: \_\_\_\_\_

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: 04/23/2015

## SPACING and UNIT INFORMATION

Distance from Completed Portion of Wellbore to Nearest Wellbore Permitted or Completed in the same formation: 294 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 470 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): \_\_\_\_\_ Unit Number: \_\_\_\_\_

## SPACING & FORMATIONS COMMENTS

Nearest wellbore permitted or completed in the same formation is the Emma F #15-18D API #05-123-30282.

Niobrara: Proposed Spacing Unit is described as: T5N,R65W:  
Sec15:N2  
Sec16:NE, E2NW

## OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
NIOBRARA	NBRR		560	GWA

## DRILLING PROGRAM

Proposed Total Measured Depth: 14770 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 84 Feet (Including plugged wells)

Will a closed-loop drilling system be used? Yes

Is H<sub>2</sub>S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No (If Yes, attach an H<sub>2</sub>S Drilling Operations Plan)

Will salt sections be encountered during drilling? No

Will salt based (>15,000 ppm Cl) drilling fluids be used? No

Will oil based drilling fluids be used? No

BOP Equipment Type:  Annular Preventor  Double Ram  Rotating Head  None

### GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 318A

### DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Land application

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Beneficial reuse

Other Disposal Description:

Cockroft Farms COGCC Facility 441086 will be used for offsite disposal.

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: 441086 or Document Number: \_\_\_\_\_

### CASING PROGRAM

Casing Type	Size of Hole	Size of Casing	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
SURF	12+1/4	9+5/8	36	0	800	355	800	0
1ST	8+3/4	7	29	0	7301	572	7301	400
1ST LINER	6+1/8	4+1/2	13.5	6601	14770	634	14770	6601

Conductor Casing is NOT planned

### DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- Rule 604.a.(1)A. Exception Zone (within 500' of Building Unit)
- Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

### GREATER WATTENBERG AREA LOCATION EXCEPTIONS

Check all that apply:

- Rule 318A.a. Exception Location (GWA Windows).
- Rule 318A.c. Exception Location (GWA Twinning).

### RULE 502.b VARIANCE REQUEST

Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number \_\_\_\_\_

## OTHER LOCATION EXCEPTIONS

Check all that apply:

- Rule 318.c. Exception Location from Rule or Spacing Order Number \_\_\_\_\_
- Rule 603.a.(2) Exception Location (Property Line Setback).

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

## OPERATOR COMMENTS AND SUBMITTAL

Comments

Letter to the Director for COGCC Rule 318A.a. and 318A.c. Exception Location Request, attached as Exception Loc Request.

Waiver for COGCC Rule 318A.a. GWA window and 318A.c. Twinning waiver, attached as Exception Loc Waiver.

Letter to Director for COGCC Rule 318A.e. Proposed Spacing Unit, attached as Proposed Spacing Unit.

Nearest permitted or existing wellbore penetrating objective formation is Kuettel #CNW-15 API #05-123-23880.

The treated interval of the Kuettel #CNW-15 API #05-123-23880 is less than 150' from the completed portion of the proposed wellbore. Since the offset well is operated by the applicant no consent is needed.

Date of Rule 305.a.(2) notice was received on 4/23/15 for one BUO, but a signed waiver of the required 30-day notice period was received from this BUO. The Rule 305.a.(2) notices sent to the rest of the BUOs were received on 4/4/15.

This application is in a Comprehensive Drilling Plan \_\_\_\_\_ CDP #: \_\_\_\_\_

Location ID: 331351

Is this application being submitted with an Oil and Gas Location Assessment application? No

I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Signed: \_\_\_\_\_ Print Name: Jeff Annable

Title: Regulatory Technician Date: 5/15/2015 Email: regulatory@petro-fs.com

Operator must have a valid water right or permit allowing for industrial use or purchased water from a seller that has a valid water right or permit allowing for industrial use, otherwise an application for a change in type of use is required under Colorado law. Operator must also use the water in the location set forth in the water right decree or well permit, otherwise an application for a change in place of use is required under Colorado law. Section 37-92-103(5), C.R.S. (2011).

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved:  Director of COGCC Date: 6/24/2015

Expiration Date: 06/23/2017

API NUMBER

05 123 41716 00

## Conditions Of Approval

All representations, stipulations and conditions of approval stated in the Form 2A for this location shall constitute representations, stipulations and conditions of approval for this Form 2 Permit-to-Drill and are enforceable to the same extent as all other representations, stipulations and conditions of approval stated in this Permit-to-Drill.

<u>COA Type</u>	<u>Description</u>
	Operator shall comply with Buffer Zone Move-In, Rig-Up Notice Rule 305.h (effective 9/30/2014).
	1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU. 2) Comply with Rule 317.j and provide cement coverage from end of 7" casing to a minimum of 200' above Niobrara. Verify coverage with cement bond log. 3) Run and submit Directional Survey from TD to base of surface casing. The operator shall comply with Rule 321, and it shall be the operator's responsibility to ensure that the wellbore complies with setback requirements in commission orders or rules prior to producing the well.
	Operator acknowledges the proximity of the listed wells: Operator agrees to: provide mitigation option 1 or 2 (per the DJ Basin Horizontal Offset Policy) to mitigate the situation, ensure all applicable documentation is submitted based on the selected mitigation option chosen, and submit a Form 42 ("OFFSET MITIGATION COMPLETED") for the remediated wells, referencing the API number of the proposed horizontal well(s) stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.  ROBB-PM F 15-7 (API NO 123-14055) WILLIAMS PM F 15-8 (API NO 123-14056)
	Operator acknowledges the proximity of the listed well: Operator agrees to: provide mitigation option 1 or 2 (per the DJ Basin Horizontal Offset Policy) to mitigate the situation, ensure all applicable documentation is submitted based on the selected mitigation option chosen, and submit a Form 42 ("OFFSET MITIGATION COMPLETED") for the remediated well, referencing the API number of the proposed horizontal well(s) stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of these wells.  FAY 1 (API NO 123-12809)

## Best Management Practices

<u>No BMP/COA Type</u>	<u>Description</u>
1 Planning	Multi-well Pads are selected in a manner which allows for resource extraction while maintaining the highest and equidistant measurements from offsetting residential areas while also honoring the wishes of the surface owner. Bayswater utilizes flood plain information, COGCC setbacks, development strategies, economics, mechanical and well bore integrity, safety, traffic, geology and operations life cycles among other items when planning horizontal sites. Bayswater plans 2 mi laterals when possible to minimize the impact on disturbance areas and the number of multi-well sites. The use of existing pad sites, access roads and the proximity to pipelines all play important roles in site selection. Additionally, Bayswater has looked the torque and drag on drilling operations to see what the limitations are on site selection compared to landing points of the laterals. Bayswater will continue to be in close communication with Surface Owner with respect to land use consideration, construction and drilling rig move in date. A meeting with the surface owner will determine the fencing and sound wall plan.

2	Community Outreach and Notification	Operator plans to have a neighborhood meeting to make sure that all concerns are addressed and to let owners know they can call if they have any complaints. Operator will also provide a toll-free hotline to all Building Unit Owners in the area if they have any complaints.
3	Pre-Construction	Anti-collision: Operator will perform an anti-collision evaluation of all active (producing, shut in, or temporarily abandoned) offset wellbores that have the potential of being within 150 feet of a proposed well prior to drilling operations for the proposed well. Notice shall be given to all offset operators prior to drilling.  Identification of plugged and abandoned wells will be identified pursuant to 319.a.(5)
4	Traffic control	Access Road: The access road will be constructed to accommodate local emergency vehicles. This road will be maintained for access at all times. Bayswater is utilizing the existing Access Road off of Fern Ave. to reduce the impact on the neighboring houses and lessen any construction activity. Traffic will be routed to minimize local interruption. Traffic activity concerns and routing have been noted in the Surface Damage and Release Agreement between Bayswater and the landowner. Access from the south is preferred as it is the least populated area of the surrounding neighborhood and has a direct route to business route 34 and also State Highway 34.
5	General Housekeeping	Visual Impacts: Equipment, regardless of construction date, which are observable from any public highway shall be painted with uniform, non-contrasting, non-reflective color tones (similar to the Munsell Soil Color Coding System), and with colors matched to, but slightly darker than, the surrounding landscape.  Maintain appearance with garbage clean-up; a trash bin will be located on site to accumulate waste by the personnel drilling the wells. Site will have unused equipment, trash and junk removed immediately. Operator shall keep the Surface Use Area as well as any roads or other areas used by Operator safe and in good order, including control of noxious weeds litter and debris.
6	Storm Water/Erosion Control	Use water bars, and other measures to prevent erosion and non-source pollution. Implement and maintain BMPs to control stormwater runoff in a manner that minimizes erosion, transport of sediment offsite, and site degradation. Co-locate gas and water gathering lines whenever feasible, and mitigate any erosion problems that arise due to the construction of any pipeline(s).
7	Material Handling and Spill Prevention	Leak Detention Plan: Pumper will visit the location daily and visually inspect all wellheads and fittings for leaks. Additionally, monthly documented SPCCP inspections are conducted pursuant to 40 CFR 112.  Control of fire hazards: All material that is considered a fire hazard shall be a minimum of 25' from the wellhead. Electrical equipment shall comply with API IRP 500 and will comply with the current national electrical code.  Operator shall comply with state and federal laws, rules and regulations governing the presence of any petroleum products, toxic or hazardous chemicals or wastes on the Subject lands.
8	Dust control	Operator shall employ practices for control of fugitive dust caused by their operations. Bayswater has agreed to apply dust control along the length of Fern avenue between 18th St. and 24th streets. Such practices shall include but are not limited to the use of speed restrictions, regular road maintenance, restriction of construction activity during high- wind days, and silica dust controls when handling sand used in hydraulic fracturing operations. Bayswater additionally has implemented the use of traffic signs when leaving the location to remind drivers of specific routes to utilize. Additional management practices such as road surfacing, wind breaks and barriers, or automation of wells to reduce truck traffic may also be required if technologically feasible and economically reasonable to minimize fugitive dust emissions.
9	Construction	Guy line anchors: All guy line anchors shall be brightly marked pursuant to Rule 604.c.(2)Q.

10	Noise mitigation	<p>Baseline studies will be conducted prior to commencement of construction and dirt work, which includes both A and C scale measurements. A sound model will be developed with the drilling rig and completion operations noise signatures. Bayswater has recently acquired a new rig signature for the Frontier # 8 rig with hospital grade mufflers. This signature information will be submitted to the COGCC. Various height sound walls will be engineered and installed where required and necessary. Temporary I-beams will be installed for walls 20' and higher. Sound walls themselves, a combination of STC-32 and STC-25 Acoustical Barrier Blankets, will be implemented. Both drilling and completion operations will be conducted within these sound walls. 10'-16' portable walls will be used to dampen gen-sets, if necessary, pursuant to sound model results. Additionally, sound blankets may be utilized in and around the rig floor to dampen noise from the draw works. Operator is investigating the possibility of powering the drill site by electricity.</p> <p>Operator utilizes appropriately sized sounds walls for instillation around production facility compressors to dampen noise. These walls are based on a forecasted model with the production facilities' noise signature.</p>
11	Emissions mitigation	<p>Green Completions - Emission Control System: Test separators and associated flow lines and sand traps shall be installed to accommodate green completions techniques pursuant to COGCC Rules. In the anticipated absence of a viable gas sales line, the flowback gas shall be thermally oxidized in an emissions control device (ECD), which will be installed and kept in operable condition for at least the first 90-days of production pursuant to CDPHE rules. This ECD shall have an adequate capacity for 1.5 times the largest flowback within a 10 mile radius, will be flanged to route gas to other or permanent oxidizing equipment and shall be provided with the equipment needed to maintain combustions where non-combustible gases are present.</p> <p>Operator is working on ROW with land owners in the area to bring a new gas sales line along Fern Ave. from the north (Arellano site), as well as working with an operator of a sales line already in place. Bayswater will connect to one of these gas sales lines as soon as practical.</p>
12	Odor mitigation	<p>Equipment shall be operated in such a manner that odors and dust do not constitute a nuisance or hazard to public welfare.</p> <p>Oil and gas operations shall be in compliance with the Department of Public Health and Environment, Air Quality Control Commission, Regulation No. 2 Odor Emission, 5 C.C.R. 1001-4, Regulation No. 3 (5 C.C.R. 1001-5), and Regulation No. 7 Section XVII.B.1 (a-c) and Section XII.</p>
13	Drilling/Completion Operations	<p>A closed –loop system will be used for drilling operations.</p> <p>Blowout Prevention Equipment (“BOPE”): A double ram and annular preventer will be used during drilling. Stabbing valves shall be installed in the event of reverse circulation and shall be prior tested with low and high pressure fluid.</p> <p>Lighting: Site lighting shall be directed downward and inward and shielded so as to avoid glare on public roads and Building Units within one thousand (1000) feet where possible. Once the drilling and completion rigs leave the site, there will be no permanently installed lighting on site.</p> <p>Bradenhead Monitoring: Operator acknowledges and will comply with COGCC Policy for Bradenhead Monitoring during Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated May 29, 2012.</p> <p>Open hole resistivity and gamma logs shall be run to describe the stratigraphy of the entire well bore and to adequately verify the setting depth of surface casing and aquifer coverage. On a multi-well pad, these open hole logs are only required on one of the first wells drilled on the pad and the Drilling Completion Report - Form 5 for every well on the pad shall identify which well was logged.</p>
14	Interim Reclamation	<p>Operator shall be responsible for segregating the topsoil, backfilling, repacking, reseeding, and recontouring the surface of any disturbed area so as not to interfere with Owner’s operations and shall reclaim such area to be returned to pre-existing conditions as best as possible with control of all weeds.</p>

15	Final Reclamation	Within 90 days subsequent to the time of plugging and abandonment of the entire site, superfluous debris and equipment shall be removed from the site. The Operator shall restore the surface of the Land affected by such terminated operations as near as possible to the previous state that existed prior to operations.
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Total: 15 comment(s)

### **Applicable Policies and Notices to Operators**

Notice Concerning Operating Requirements for Wildlife Protection.

Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area.

### **Attachment Check List**

<b><u>Att Doc Num</u></b>	<b><u>Name</u></b>
2238425	OFFSET WELL EVALUATION
2238441	PROPOSED SPACING UNIT
2238442	DEVIATED DRILLING PLAN
2238443	WELL LOCATION PLAT
400830985	FORM 2 SUBMITTED
400840487	LEASE MAP
400840488	EXCEPTION LOC REQUEST
400840491	EXCEPTION LOC WAIVERS
400856874	DIRECTIONAL DATA
400857085	OffsetWellEvaluations Data

Total Attach: 10 Files

### **General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
Permit	Final Review Completed. No LGD or public comment received.	6/24/2015 8:17:19 AM
Permit	Operator revised well plan.  Operator submitted revised: Well Location Plat, Offset Well Evaluation, Deviated Drilling Plan, Proposed Spacing Unit and Directional Data Survey.  Operator revised: Bottom Hole Location, Spacing Comments, Spacing Acreage, Proposed Total Measured Depth and Casing Program.	6/22/2015 1:46:21 PM
Engineer	Offset Wells Evaluated. Offset Wells Evaluated on revised length of lateral, same COA's pertain, 6/22/15.	5/29/2015 11:06:34 AM
Permit	Passed Completeness	5/19/2015 12:11:29 PM

Total: 4 comment(s)